

NutritionTimes

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Being Supplement Savvy

Ellen Coleman, RD, MA, MPH®



evaluating dietary supplements and making knowledgeable decisions when choosing them.

The Food and Drug Administration (FDA) does not review dietary supplements for safety, effectiveness, purity, or potency before they are marketed. The amount of the active ingredient may be higher or lower than the amount listed on the product label. A supplement may also contain contaminants or dangerous levels of active ingredients that may cause injury or death. The FDA has the duty to take action against any unsafe dietary supplement that reaches the market. If the FDA can prove that claims on dietary supplements are false and misleading, the agency may take action against these products.

First, consider the total diet. By definition, a supplement is a substance to augment the diet. Supplements are not meant to replace eating a wide variety of healthful food. Information on vitamin and mineral functions, potential benefits, and upper safe limits of intake is available at the National Academy of Sciences Web site at: www.iom.edu/iom/iomhome.nsf/Pages/FNB+Reports.

Check with a doctor or other healthcare provider before using a supplement. Just because a product contains "natural" ingredients does not mean that it is safe. Some products may interact with prescription and/or over-the-counter

continued on page 5

Inside This Issue

Water, Water Everywhere...
Are You Drinking Enough? Page 2

Are My Ears Deceiving Me?
A Skinny Pill for Kids? Page 3

Buyer Beware:
How to Fight Back Page 4

Many dietary supplements including vitamins, minerals, amino acids, herbs and other botanicals are marketed to improve performance and health. Some dietary supplements may be safe and provide health or performance benefits, while others may be ineffective, dangerous, or contain ingredients banned by athletic organizations. Considering the plentiful and confusing information that is available regarding dietary supplements, it is a challenge to sort out trustworthy information from questionable information. The following information can be helpful for

Water, Water Everywhere...Are you Drinking Enough?

By Patricia Stabile, RD

Have you ever felt tired, gotten headaches, lost your appetite, been light headed? Has your skin been flushed? Have you had dry mouth and eyes, a burning sensation in your stomach? Has your urine been dark yellow/orange with strong odor? Did you know that these symptoms are signs of early dehydration or an inadequate intake of water? Did you know if dehydration becomes more serious you may begin to have difficulty swallowing, become clumsy, have shriveled skin, sunken eyes and dim vision, painful urination, numb skin, muscle spasms and delirium? Lack of water can have serious effects on our health and most people do not relate lack of water to many of these conditions until it is medically pointed out to them.

Human beings cannot live without water, thus making it the most essential of all nutrients other than oxygen. It makes up about 70% of our adult body weight. Since the body cannot store excess water for future use, daily intakes are imperative for almost all body functions. Even though the importance of drinking adequate amounts of water has been stressed by many health professionals, almost one third of the population continues to be mildly dehydrated.

So, how do we define dehydration? The clinical definition is as follows: "Dehydration can be acute, as from a bout of intense exercise, or chronic, resulting from less than adequate rehydration of daily water losses over a period of time. Both types of dehydration are defined as a 1% or greater loss of body weight from fluid loss." This means if a 150 pound person was 1% dehydrated he would have a fluid loss of 1 and 1/2 pounds. This 1% dehydration would cause increased body temperature. If a person is at greater than 10% dehydration they increase their risk of heat stroke.

The function of water in the body is crucial. Water molecules fill just about every space in the body and help to form large molecules like proteins and glycogen (which is stored in the liver and muscles). Since water is the primary fluid in the body, it acts as a solvent for minerals, vitamins, amino acids, glucose and other nutrients. Water is necessary for the digestion of food and is needed for the absorption, transportation and use of nutrients. Water is needed for the excretion of toxins and waste products and is critical to control body temperature. We depend on water for everything from energy production and joint lubrication to reproduction.

Now that we know how crucial water is to body function, it is time to consider the health risks associated with short-term and chronic dehydration. The following Table lists the potential health risks associated with dehydration:

Possible Influence of Chronic, Mild Dehydration and Poor Fluid Intake on Human Health and Performance Factors (1, 2):

- Diminished physical performance
- Diminished mental performance
- Diminished salivary gland function
- Increased risk of kidney stones in susceptible population
- Increased risk of urinary tract cancers (3)
- Increased risk of colon cancer (3)
- Increased risk of breast cancer (3)
- Increased risk of childhood obesity
- Increased risk of mitral valve prolapse in susceptible population

(1) Reprinted from Kleiner, SM. Water: An essential but overlooked nutrient. *J Am Diet Assoc.* 1999;99:200-206

(2) Some of these associations need further confirmation.

(3) Specifically associated with water consumption.

In addition to the above listed risks, a study published in the American Journal of Epidemiology in 2002 revealed, "*drinking high levels of water can significantly reduce the risk of coronary heart disease.*" It further stated, "*that drinking high amounts of plain water is as important as exercise, diet, or not smoking in preventing coronary heart disease.*" With all this in mind, there should be no question as to whether or not we should increase our consumption of water.

Learning to gauge your water needs can be confusing. Most would say "just drink when your thirsty." However, your thirst mechanism



is not the best way to tell if your getting enough water. Typically, our thirst mechanism is not triggered until we are already mildly dehydrated. The thirst mechanism is set-off by abnormally high concentrated body fluids. As we sweat, our blood becomes more concentrated and the blood level of sodium becomes abnormally high. This high level of blood sodium triggers the thirst mechanism and increases the desire to drink. By quenching our thirst and drinking plenty of water we bring the blood to its normal concentration. Athletes, young children and seniors tend to have poor thirst mechanisms and need to be monitored closely for adequate fluid needs.

Fluid needs will vary for the adult, child, elderly and athletes. On average, athletes will need more water than the non-athletic person secondary to more fluid losses through sweat. Fluid needs for all will depend on age, weight, size, activity and total calories eaten in a day. If possible, it would be wise to check with a registered dietitian for your fluid needs as she can help you calculate just how much water you need based on all the varying factors.



As previously mentioned, exact amounts will vary from person to person, but there are some general guidelines to follow. The standard recommendation of eight, 8 ounce glasses of water per day is still a good plan to follow. This is about 1 cup of water for every 20 pounds of body weight. Try keeping a pitcher of water for the

continued on page 3

Are my ears Deceiving me? A skinny Pill for kids?

By Kitchie Ramos, PSH Dietetic Intern and Julie Mortimore, RD

Nope, it is true. My ears did not deceive me. There is a skinny pill for kids. The entrepreneur Edita Kaye conjured up a diet pill to help parents with their overweight children. She saw the need, so she developed a product-an entrepreneur's way of thinking.

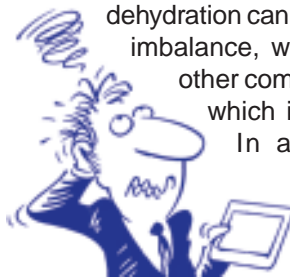


The skinny pill is supposed to help overweight children, ages 6 to 12, lose weight. According to a CNN report, Edita Kaye was simply responding to the numerous e-mail messages she received from parents requesting advice for their overweight kids. She also heard from children wanting to know if it is OK to take their parent's skinny pill (the skinny pill for adults was Kaye's first diet product).

A better response to the parent's inquiries would have been a referral to a more qualified healthcare professional, such as a registered dietitian (RD) that specializes in pediatrics. A pediatric RD has the educational background and experience to work with parents and children to improve their diet and incorporate physical activities. A responsible response to children requesting their own skinny pill is simply

no. The same response that is usually generated by adults when children ask for things such as sugary treats, staying up past bedtime, and not brushing their teeth.

The skinny pill for kids contains three herbs that are known diuretics, uva ursi, juniper berry, and buchu leaf. This alarms healthcare professionals because the pill gives a child not one, but three diuretics. A diuretic can cause a person to release water and can lead to dehydration. Severe dehydration can cause electrolyte imbalance, which can lead to other complications, one of which is cardiac arrest.



In addition, taking these diuretics can also cause kidney problems. The Physicians Desk Reference for Herbal Medicines plainly states that taking uva ursi over a long period of time can cause liver damage due to the possible release of hydroquinones. The herb is contraindicated in children under 12 years old.

Edita calls herself "America's favorite Nutritionist." We know she has her own talk show and that she has written books. But her educational background and creden-

tials are not well known. When e-mailing Edita Kaye's website to question her educational background and credentials, their response was, "Edita Kaye is a Nutritionist. She has a Masters in Education and is a medical journalist." Although those are both noble disciplines, neither provides sufficient background in the field in nutrition.

The National Institutes of Health (NIH) database (PubMed), reveals not one single published clinical trial that has been conducted with anything called the Skinny Pill for kids or the combination and amount of active ingredients that make up the formula related to weight loss in children ages 6 to 12. (www.nutraingredients-usa.com/news/printnews.asp?id=5888)

So how can we trust this is safe for kids if it hasn't been tested on kids? We can't.

It's up to the consumers to make the right decision. The skinny pill is considered a dietary supplement, and the Food and Drug Administration (FDA) does not regulate or inspect dietary supplements. Therefore the skinny pill may contain ingredients that have not been proven safe or effective. So until further research has been done, take precaution. Ask your physician questions before considering taking any form of unregulated supplement.

Water, Water Everywhere...Are you Drinking Enough?

continued from page 2

day on your desk at work or on the kitchen table at home. Do take frequent water breaks throughout the day. Carry a water bottle in your car at all times. Start your meals with soup and drink a beverage with all your meals and snacks. Remember, when exercising, especially in hot or humid weather, you need to drink more. The recommendation for exercise is 2 glasses of water 2 hours before exercise, 4 to 6 ounces every 15 to 20 minutes during exercise and after exercise, 2 to 2½ cups of water for every pound of body weight lost during exercise.

Other considerations to keep in mind besides exercise for increased fluid needs

are low humidity, high altitudes, dieting, high fiber diets and increased fluids losses from the consumption of caffeine and especially alcohol. Pregnant and breastfeeding women will also need more water. The breastfeeding woman will need about 3 to 4 more 8 ounce glasses of water per day. Children and infants will need more water due to larger surface area per unit of body weight compared to adults, a higher percentage of body water and kidney concerns. For exact amounts of water intake for children it is best to check with a pediatric specialist. The guidelines mentioned in the previous paragraph for adults will be fine for healthy seniors, however, dependent seniors, those who can not care for themselves or are ill, will also need to seek the guidance of a professional.

Overall, the best way to tell if you are getting enough to drink is to check your urine. If your urine is pale yellow to clear and odorless, you are probably getting enough to drink. But if your urine is dark yellow/orange or has a strong odor or both, you may be dehydrated.

Well, we have discussed the symptoms of dehydration, the essential need for water, the long term ill health affects of dehydration and finally how much we all need on a regular basis. So the question still remains... Are you drinking enough water? If your answer is no, it is surely time to get started, provided all the health benefits that come from drinking plenty of water every day. **Get healthy, stay healthy, drink up!**

Buyer Beware: HOW to Fight Back

Katryn Soltanmorad, Dietetic Intern and Isabel Simard, MS, RD, CLE

Nearly a century ago, consumers were enticed with medicine road shows and loud sales hawkers advertising dietary supplements such as Rattlesnake oils, Magnetic Plasters, Pink Pills for Pale People, Liver pads, and the list goes on. Today the same road show continues, only it manifests itself in storefronts, booths in large shopping malls, retail stores, grocery and health



food stores, television, radio, print, Internet, and any other form of communication to the public. According to the National Nutritional Foods Association (NNFA)¹, U.S. consumers

spent approximately \$17.7 billion dollars on supplements in 2001. With a large market share and huge demand for supplements in this country, those affected most are older adults. On any given day, ads reflect older adults coping or doing better with an advertised dietary supplement. Most of these ads do not share possible drug-nutrient interactions or adverse side effects. They also do not recommend consulting with a physician, pharmacist, and/or dietitian before taking any dietary supplements. Sadly, according to the National Institute on Aging, the majority of health care fraud falls victim to those over the age of 65.² It's no wonder that 52% of people over the age of 50 and older surveyed in American Association of Retired Person (AARP) 2001 poll are taking supplements on a daily basis.³

UNPROVEN QUACKERY CLAIMS

Dietary supplements come in all shapes and forms. They can be sold as tablets, capsules, powders, liquids, and extracts. Today they can also be found in energy bars, powder or liquid shakes, cereals, chips, teas, and other herbal drinks. Older adults are a primary target market for most supplement companies, due to the chronic health



problems that manifest in older age. These companies are interested in making money, not in a person's well being. Major products that aim to "cure" or "elevate" certain conditions include, but are not limited to: (following was taken from the National Institute on Aging)

Anti-Aging Products & Claims: No studies to date conclude that any product in the market can slow the aging process. However, including a healthy diet and exercise in your lifestyle, and not smoking can decrease the risk of certain conditions that typically occur as age increases.



Arthritis Remedies: Arthritis is a complex condition with symptoms that can range from chronic to flares of pain at unknown times. Up to date, no conclusive studies have shown that dietary or herbal supplements can cure or ease the conditions of arthritis.

Cancer Cures: Unfortunately those with cancer are easy prey since they are faced with a life threatening disease. This may bring feelings of fear, depression, anxiety, and hopelessness. Those promoting cancer "cure" products rely on these feelings to lure people to buy their products. These products have no proven benefits and may only delay positive outcomes from effective and reliable treatments provided by their physician.

Memory Aids & Enhancers: To date, claims made by those selling memory-enhancing products have not been proven effective. Again, as people age, preserving memory becomes an important issue that supplement companies take advantage of.

HOW TO STAY HEALTHY

Reducing the risk of chronic illnesses can be done by following the USDA's Food Guide Pyramid, exercising regularly, not



smoking, staying hydrated, and keeping your mind active.

If you decide to take dietary supplements, remember to consult with your doctor, pharmacist and/or dietitian. Using dietary and herbal supplements can be as dangerous as using prescription medications. For more information regarding older adults and supplements go to: The National Institute on Aging (NIA) at www.nia.nih.gov.

REFERENCES

1. Facts and Stats: Facts About the Nutrition Industry National Nutritional Foods Association, NNFA. Available at: www.nnfa.org/facts/index.htm.
2. Health Quackery: Spotting Health Scams National Institute on Aging, AgePage. Available at: www.nia.nih.gov/health/agepages/healthy.htm.
3. Your Health: Strike Three for Dietary Supplements American Association of Retired Person, AARP. Available at: www.aarp.org/bulletin/departments/2003/health/0510_health_1.html.

PROTECTING YOURSELF FROM HEALTH SCAMS

Important indicators that may protect you from being a victim of nutrition quackery. Look for these red flags:

- ➔ Promises for a cure.
- ➔ Claims from a special, secret, or ancient formula.
- ➔ Use of testimonials or "case histories" from satisfied patients.
- ➔ Claims effective for a wide variety of ailments.
- ➔ Offer of additional "free" gift or "special promotion."
- ➔ Requires advance payment of product.
- ➔ Personal testimonies from people claiming their ailments were "cured" or "eased."

Being Supplement Savvy

continued from page 1

medications (as well as other supplements) and can cause serious adverse effects. Certain supplements such as herbs can have unwanted effects during surgery. Read the product label, follow all directions, and heed any warnings. Harmful effects from the use of dietary supplements should be reported to the FDA MedWatch Hotline at 800-332-1088.

Some dietary supplements may contain ingredients such as androstenedione in "anabolic/weight gainer" products and ephedrine in "fat burning/energy enhancing" products that can cause positive drug tests for banned substances. The product may use an unfamiliar name for the ingredient or the ingredient may not be declared on the supplement label. At the very least, the unwitting use of banned products may result in a doping suspension.

The following tips may be helpful when choosing a supplement:

The USP (United States Pharmacopeia) designation on the label of a vitamin/mineral supplement indicates that the product passes tests for dissolution, disintegration, potency, and purity.

Nationally known food and drug manufacturers generally make supplements under the strict quality control procedures they already have in place. The manufacturer should be able to demonstrate that the product passes tests for content potency, purity, and uniformity. If the company does not answer questions or address complaints, do not use the product.

The supplement label should provide accurate and appropriate information. If statements are unclear or the label makes preposterous claims, it is unlikely that the company follows good quality control

procedures. Be wary if the claims for the product sound too good to be true. No dietary supplement will guarantee optimum performance and health.

Consumer Lab (www.consumerlab.com) provides independent test results and information to help consumers and health-care professionals evaluate and select dietary supplements. Products that pass Consumer Lab's testing are eligible to bear the CL Seal of Approval.

Supplement Watch (www.supplementwatch.com) is dedicated to educating consumers about the potential benefits and risks of dietary supplements and provides an independent and science-based evaluation of supplements.

The Food and Drug Administration Center for Food Safety and Applied Nutrition provides the following tips for evaluating supplement information on the internet:

- Who operates the site? Look for web sites operated by the government, a university, or a reputable medical or health-related association.
- Is the purpose of the site to educate or sell a product? Most nonprofit and government sites do not advertise and usually provide free access to the site and educational materials.
- Is the information provided supported by research findings? The study should be current, published in a reputable peer-reviewed journal, and cited in the National Library of Medicine database (PubMed). (www.ncbi.nlm.nih.gov/PubMed)
- Think twice about chasing the latest headline. Science does not advance by dramatic discoveries, but by taking many small steps and slowly building toward a consensus.

Resources

Food and Drug Administration Center for Food Safety and Applied Nutrition web page. Tips for the savvy supplement user: making informed decisions and evaluating

information. (www.cfsan.fda.gov/~dms/ds-savvy.html)

National Consumers League. A consumer's guide to dietary supplements. (www.nclnet.org/dietsuppsbrochure.pdf)



ESSAY CONTEST

**CONGRATULATIONS TO the 2003
6th Annual Health and Nutrition
Essay Contest winners...**

1st Place

**Natalie Pifer
Stranger in the mirror
Edison High School**

2nd Place

**Elizabeth Geli
The National School Lunch Program
Valencia High School**

3rd Place

**Paul Tuan Tran
Empty Stomachs, Starving Minds
Edison High School**

Honorable Mention

**Jonathan Nguyen
Benefits of Fruits and Vegetables
Edison High School**



NutritionTimes



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